AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application.

1-15. (Cancelled)

16. (Withdrawn/Currently Amended) A method of determining the level of LPA in a sample, comprising:

monitoring binding of a candidate compound to G protein-coupled receptor p2y9 by measuring the response of G protein-coupled receptor p2y9 expressed on the cell surface to LPA,

wherein the G protein-coupled receptor p2y9 comprises a sequence with at least a 98.1% ~~at least a 95%~~ sequence identity with SEQ ID NO: 1,

wherein said candidate compound comprises inhibitors of p2y9 dependent LPA activity, and

wherein said G protein-coupled receptor p2y9 comprises seven transmembrane regions.

17. (Currently Amended) A method of screening for a candidate compound that acts as an agonist of a G protein-coupled receptor p2y9, comprising the step(s) of:

(a) preparing a first group and a second group of cells that express the G protein-coupled receptor p2y9 on the cell surfaces;

(b) adding LPA to the cell surfaces of the first group of cells;

(c) monitoring an intracellular activity in the first group of cells, said intracellular activity being associated with binding of LPA to p2y9;

(d) adding said candidate compound to the second group of cells;

(e) monitoring an intracellular activity in the second group of cells, said intracellular activity being the same as the intracellular activity of step (c);

(f) comparing the intracellular activity in step (c) with the intracellular activity in step (e); and

(g) determining whether said candidate compound is an agonist of the G protein-coupled receptor p2y9 based on the comparison in step (f),

wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence having a sequence identity of at least 98.1% ~~at least 95%~~ to the amino acid sequence of SEQ ID NO: 1, and

wherein said G protein-coupled receptor p2y9 comprises seven transmembrane regions.

18. (Cancelled)

19. (Previously Presented) The method according to claim 17, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting calcium concentration in the cells.

20. (Previously Presented) The method according to claim 17, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting cAMP concentration in the cells.

21. (Cancelled)

22. (Currently Amended) A method of screening for a candidate compound that acts as an antagonist of a G protein-coupled receptor p2y9, comprising the step(s) of:

(a) preparing a first group and a second group of cells that express the G protein-coupled receptor p2y9 on the cell surfaces;

(b) adding LPA to the cell surfaces of the first group of cells;

(c) monitoring an intracellular activity in the first group of cells, said intracellular activity being associated with binding of LPA to p2y9;

(d) adding said candidate compound and LPA to the second group of cells;

(e) monitoring an intracellular activity in the second group of cells, said intracellular activity being the same as the intracellular activity of step (c);

(f) comparing the intracellular activity in step (c) with the intracellular activity in step (e); and

(g) determining whether said candidate compound is an antagonist of the G protein-coupled receptor p2y9 based on the comparison in step (f),

wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence having a sequence identity of <u>at least 98.1%</u> ~~at least 95%~~ to the amino acid sequence of SEQ ID NO: 1, and

wherein said G protein-coupled receptor p2y9 comprises seven transmembrane regions.

23. (Previously Presented) The method according to claim 22, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting calcium concentration in the cells.

24. (Previously Presented) The method according to claim 22, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting cAMP concentration in the cells.

25. (Previously Presented) The method according to claim 22, wherein the candidate compound is an inhibitor of carcinoma cell invasion.

26. (Previously Presented) The method according to claim 17, wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence represented by SEQ ID NO: 1.

27. (Previously Presented) The method according to claim 26, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting calcium concentration in the cells.

28. (Previously Presented) The method according to claim 26, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting cAMP concentration in the cells.

29. (Cancelled)

30. (Previously Presented) The method according to claim 22, wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence represented by SEQ ID NO: 1.

31. (Previously Presented) The method according to claim 30, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting calcium concentration in the cells.

32. (Previously Presented) The method according to claim 30, wherein the monitoring the intracellular activity in steps (c) and (e) comprises detecting cAMP concentration in the cells.

33. (Previously Presented) The method according to claim 30, wherein the candidate compound is an inhibitor of carcinoma cell invasion.

34. (Currently Amended) A method of screening for a candidate compound that acts as an inhibitor of binding of LPA to G protein-coupled receptor p2y9, comprising the step(s) of:

(a) preparing a plurality of groups of cells that express the G protein-coupled receptor p2y9 on the cell surfaces;

(b) adding (1) the candidate compound and (2) labeled LPA to each of said plurality of groups of cells that express the G protein-coupled receptor p2y9 on the cell surfaces, said candidate compound being added in a different concentration to each of said plurality of groups of cells that express the G protein-coupled receptor p2y9 on the cell surfaces,

(c) detecting activity of said labeled LPA bound to the G protein-coupled receptor p2y9 in each of said plurality of groups of cells that express the G protein-coupled receptor p2y9 on the cell surfaces, and

(d) determining that said candidate compound is an inhibitor of binding of LPA to G protein-coupled receptor p2y9 when the activity detected in step (c) decreases dose-dependently with the candidate compound among said plurality of groups of cells that express the G protein-coupled receptor p2y9 on the cell surfaces,

wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence having a sequence identity of at least 98.1% ~~at least 95%~~ to the amino acid sequence of SEQ ID NO: 1, and

wherein said G protein-coupled receptor p2y9 comprises seven transmembrane regions.

35. (Previously Presented) The method according to claim 34, wherein said inhibitor of binding of LPA to G protein-coupled receptor p2y9 is an agonist candidate of G protein-coupled receptor p2y9.

36. (Previously Presented) The method according to claim 34, wherein said inhibitor of binding of LPA to G protein-coupled receptor p2y9 is an antagonist candidate of G protein-coupled receptor p2y9.

37. (Previously Presented) The method according to claim 34, wherein said G protein-coupled receptor p2y9 comprises an amino acid sequence represented by SEQ ID NO: 1.

38. (Previously Presented) The method according to claim 37, wherein said inhibitor of binding of LPA to G protein-coupled receptor p2y9 is an agonist candidate of G protein-coupled receptor p2y9.

39. (Previously Presented) The method according to claim 37, wherein said inhibitor of binding of LPA to G protein-coupled receptor p2y9 is an antagonist candidate of G protein-coupled receptor p2y9.